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3737

**IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE**

Serial No. : 09/853,298  
Applicants : Nancy P. CAMACHO et al.  
Filed : May 10, 2001  
For : DETERMINATION OF THE  
ULTRASTRUCTURE OF  
CONNECTIVE TISSUE BY AN...  
Art Unit : 3737  
Examiner : Ruth S. Smith  
Docket No. : 00328/RSB  
Customer No.: 01933  
Confirmation No.: 6040

Commissioner for Patents  
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Alexandria, VA 22313-1450

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Attorney: Richard S. Barth

Dated: APRIL 20, 2004

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**REQUEST FOR INITIALED COPIES OF  
FORMS PTO/SB/08A AND PTO/SB/08B**

S I R :

Enclosed with the April 6, 2004 Office Action were copies of  
sheets 1 to 5 of the Form PTO/SB/08B dated August 22, 2001, with  
a diagonal line drawn through all publications and the following  
handwritten notation: "NO COPIES."

Also enclosed with the April 6, 2004 Office Action was a  
copy of the Form PTO/SB/08A dated March 11, 2004 with a line  
drawn through USP 6,230,044. No reason was provided in the  
April 6, 2004 Office Action for such line being drawn through USP  
6,230,044.

Submitted concomitantly herewith are the following:

(1) Sheets 1 to 5 of the Form PTO/SB/08B dated August 22, 2001 and copies of all the publications cited on sheets 1 to 5 of the Form PTO/SB/08B dated August 22, 2001; and

(2) Form PTO/SB/08A dated March 11, 2004 and a copy of USP 6,230,044.

The Examiner is respectfully requested to return copies of sheets 1 to 5 of the Form PTO/SB/08B dated August 22, 2001 and Form PTO/SB/08A dated March 11, 2004 with the Examiner's initials in the left column next to each cited publication to indicate that the cited publications were considered and made of record.

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Respectfully submitted,



Richard S. Barth  
Reg. No. 28,180

Encs.: (1) Copies of sheets 1 to 5 of Form PTO/SB/08B dated August 22, 2001 with copies of all the publications cited therein

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PTO/SB/08B (08-00)

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				Application Number	09/853,298
				Filing Date	May 10, 2001
				First Named Inventor	Nancy CAMACHO
				Group Art Unit	2878
				Examiner Name	
Sheet	1	of	5	Attorney Docket Number	00328/RSB

**OTHER PRIOR ART - NON-PATENT LITERATURE DOCUMENTS**

Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Include name of author (in CAPITAL LETTERS), title of article, title of item, date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
		<p><u>Infrared and Raman Spectroscopy of Biological Materials</u>, Eds. Gremlich, H.U., Yan, B., New York, Marcel-Dekker, pp. 323-377 (2001)</p> <p>Camacho, N.P., Hou, L., Toledano, T.R., Ilg, W.A., Brayton, C.F., Raggio, C.L., Root, L., and Boskey, A.L., "The Material Basis for Reduced Mechanical Properties in Oim Mice Bones", <u>J. Bone Miner. Res.</u>, <u>14</u>, pp. 264-272, (1999)</p> <p>Lazarev, Y.A., Grishkovsky, B.A., and Khromova, T.B., "Amide I Band of IR Spectrum and Structure of Collagen and Related Polypeptides", <u>Biopolymers</u>, <u>24</u>, pp. 1449-1478, (1985)</p> <p>Liu, K.Z., Dembinski, T.C., and Mantsch, H.H., "Rapid Determination of Fetal Lung Maturity from Infrared Spectra of Amniotic Fluid", <u>Am. J. Obstet. Gynecol.</u>, <u>178</u>, pp. 234-241, (1998)</p> <p>Mendelsohn, R., and Moore, D.J., "Vibrational Spectroscopic Studies of Lipid Domains in Biomembranes and Model Systems", <u>Chem. Phys. Lipids</u>, <u>96</u>, pp. 141-157, (1998)</p> <p>Moore, D.J., Rerek, M.E., and Mendelsohn, R., "Lipid Domains and Orthorhombic Phases in Model Stratum Corneum: Evidence from Fourier Transform Infrared Spectroscopy Studies", <u>Biochem. Biophys. Res. Commun.</u>, <u>231</u>, pp. 797-801, (1997)</p> <p>Moore, D.J., Gioioso, S., Sills, R.H., and Mendelsohn, R., "Some Relationships Between Membrane Phospholipid Domains, Conformational Order, and Cell Shape in Intact Human Erythrocytes", <u>Biochim. Biophys. Acta.</u>, <u>1415</u>, pp. 342-348, (1999)</p>	
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		<p>Paschalis, E.P., Betts, F., DiCarlo, E., Mendelsohn, R., and Boskey, A.L., "FTIR Microspectroscopic Analysis of Normal Human Cortical and Trabecular Bone", <u>Calcif. Tissue Int.</u>, <u>61</u>, pp. 480-486, (1997)</p> <p>Paschalis, E.P., Betts, F., DiCarlo, E., Mendelsohn, R., and Boskey, A.L., "FTIR Microspectroscopic Analysis of Human Iliac Crest Biopsies from Untreated Osteoporotic Bone", <u>Calcif. Tissue Int.</u>, <u>61</u>, pp. 487-492, (1997)</p> <p>Camacho, N.P., Landis, W.J., and Boskey, A.L., "Mineral Changes in a Mouse Model of Osteogenesis Imperfecta Detected by Fourier Transform Infrared Microscopy", <u>Connect. Tissue Res.</u>, <u>35</u>, pp. 259-265, (1996)</p> <p>Camacho, N.P., Rimnac, C.M., Meyer, R.A.J., Doty, S., and Boskey, A.L., "Effect of Abnormal Mineralization on the Mechanical Behavior of X-Linked Hypophosphatemic Mice Femora", <u>Bone</u>, <u>17</u>, pp. 271-278, (1995)</p> <p>Gadaleta, S.J., Camacho, N.P., Mendelsohn, R., and Boskey, A.L., "Fourier Transform Infrared Microscopy of Calcified Turkey Leg Tendon", <u>Calcif. Tissue Int.</u>, <u>58</u>, pp. 17-23, (1996)</p> <p>Boskey, A.L., Guidon, P., Doty, S.B., Stiner, D., Leboy, P., and Binderman, I., "The Mechanism of Beta-Glycerophosphate Action in Mineralizing Chick Limb-Bud Mesenchymal Cell Cultures", <u>J. Bone Miner. Res.</u>, <u>11</u>, pp. 1694-1702, (1996)</p> <p>Kidder, L.H., Kalasinsky, V.F., Luke, J.L., Levin, I.W., and Lewis, E.N., "Visualization of Silicone Gel in Human Breast Tissue Using New Infrared Imaging Spectroscopy", <u>Nat. Med.</u>, <u>3</u>, pp. 235-237, (1997)</p> <p>Lewis, E.N., Kidder, L.H., Levin, I.W., Kalasinsky, V.F., Hanig, J.P., and Lester, D.S., "Applications of Fourier Transform Infrared Imaging Microscopy in Neurotoxicity", <u>Ann. N.Y. Acad. Sci.</u>, <u>820</u>, pp. 234-247, (1997)</p>	
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		<p>Marcott, C., Reeder, R.C., Paschalis, E.P., Tatakis, D.N., Boskey, A.L., and Mendelsohn, R., "Infrared Microspectroscopic Imaging of Biomineralized Tissues Using a Mercury-Cadmium-Telluride Focal-Plane Array Detector", <u>Cell. Mol. Biol. (Noisy-le-grand)</u>, <u>44</u>, pp. 109-115, (1998)</p> <p>Camacho, N.P., Mendelsohn, R., Grigienė, R., Torzilla, P.A., "Polarized FI-IR Microscopic Determination of Collagen Orientation in Articular Cartilage", 42nd Annual Meeting, Orthopaedic Research Society, February 19-22, 1996, Atlanta, Georgia</p> <p>Camacho, N.P., West, P., Torzilli, P.A., Mendelsohn, R., "FTIR Microscopic Imaging of Collagen and Proteoglycan in Bovine Cartilage", <u>Biopolymers</u>, 62:1-8 (2001)</p> <p>Potter, K., Kidder, L.H., Levin, I.W., Lewis E.N., Spencer R.G., "Imaging of Collagen and Proteoglycan in Cartilage Sections Using Fourier Transform Infrared Spectral Imaging", <u>Arthritis &amp; Rheum</u> 44(4):846-855 (2001)</p> <p>Schumacher, H.R., Klippel, J.H., and Koopman, W.J., "Articular Cartilage", <u>Primer on the Rheumatic Diseases</u>, 11<sup>th</sup> edition, Atlanta: The Arthritis Foundation, pp. 14-18, (1993)</p> <p>Horecker, B., Kaplan, N.O., Marmur, J., and Scheraga, H.A., "Collagens", <u>Conformation in Fibrous Proteins and Related Synthetic Polypeptides</u>, <u>New York: Academic Press</u>, editors Fraser, R.D.B. and MacRae, T.P., pp. 344-402, (1973)</p> <p>George, A., and Veis, A., "FTIRS in H<sub>2</sub>O Demonstrates that Collagen Monomers Undergo a Conformational Transition Prior to Thermal Self-Assembly In Vitro", <u>Biochemistry</u>, <u>30</u>, pp. 2372-2377, (1991)</p>	
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		<p>Lazarev, Y.A., Grishkovsky, B.A., Khromova, T.B., Lazareva, A.V., and Grechishko, V.S., "Bound Water in Collagen-Like Triple Helical Structure", <u>Biopolymers</u>, <u>32</u>, pp. 189-195, (1992)</p> <p>Bychkov, S.M., and Kuzmina, S.A., "Study of Tissue Proteoglycans by Means of Infrared Spectroscopy", <u>Biull. Eksp. Biol. Med.</u>, <u>114</u>, pp. 246-249, (1992)</p> <p>Bychkov, S.M., Bogatov, V.N., and Kuzmina, S.A., "Infrared Spectra of Cartilage Proteoglycans", <u>Bull. Eksp. Biol. Med.</u>, <u>90</u>, pp. 561-563, (1980)</p> <p>Bychkov, S.M., Bogatov, V.N., and Kuzmina, S.A., "Study of Different Proteoglycan Salts", <u>Bull. Eksp. Biol. Med.</u>, <u>92</u>, pp. 302-305, (1981)</p> <p>Buckwalter, J.A., and Mow, V.C., "Injuries to Cartilage and Meniscus: Sports Injuries to Articular Cartilage", DeLee, J.C., and Drez, D., Jr., <u>Orthopaedic-Sports Medicine Principles and Practice</u>, Philadelphia: W.B. Saunders Company, pp. 82-107, (1994)</p> <p>Potter, H.G., Linklater, J.M., Allen, A.A., Hannafin, J.A., and Haas, S.B., "Magnetic Resonance Imaging of Articular Cartilage in the Knee: An Evaluation With Use of Fast-Spin-Echo Imaging", <u>J. Bone Joint, Surg. Am.</u>, <u>80</u>, pp. 1276-1284, (1998)</p> <p>Recht, M.P., and Resnick, D., "Magnetic Resonance Imaging of Articular Cartilage: An Overview" <u>Top. Magn. Reson. Imaging</u>, <u>9</u>, pp. 328-336, (1998)</p> <p>Speer, D.P., and Dahners, L., "The Collagenous Architecture of Articular Cartilage, Correlation of Scanning Electron Microscopy and Polarized Light Microscopy Observations", <u>Clin. Orthop.</u>, <u>167</u>, pp. 267-275, (1979)</p>	
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Substitute for Form 1449A/PTO

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INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

Application Number

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First Named Inventor

Nancy CAMACHO

Group Art Unit

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		<p>Panula, H.E., Hyttinen, M.M., Arokoski, J.P., Langsjo, T.K., Pelettari, A., Kiviranta, I., and Helminen, H.J., "Articular Cartilage Superficial Zone Collagen Birefringence Reduced and Cartilage Thickness Increased before Surface Fibrillation in Experimental Osteoarthritis", <u>Ann. Rheum. Dis.</u>, <u>57</u>, pp. 237-245, (1998)</p> <p>Gadaleta, S.J., Landis, W.J., Boskey, A.L., and Mendelsohn, R., "Polarized FT-IR Microscopy of Calcified Turkey Leg Tendon", <u>Connect. Tissue Res.</u>, <u>34</u>, pp. 203-211, (1996)</p> <p>Pachalis, E.P., F. Betts, E. DiCarlo, J.M. Lane, R. Mendelsohn, and A.L. Boskey, "Mineral and Organic Matrix Changes in Osteoporosis", <u>J. Dent. Res.</u>, <u>76</u>, p. 287 (1997)</p> <p>M. Khan, M. Yamauchi, S. Srisawasdi, D. Stiner, S. Doty, E.P. Paschalis, A.L. Boskey, "Homocysteine Decreases Chondrocyte-Mediated Matrix Mineralization in Differentiating Chick Limb-bud Mesenchymal Cell Micro-Mass Cultures", <u>Bone</u>, <u>28</u>, 387-398 (2001)</p> <p>Hollander, A.P., T.F. Heathfield, C. Webber, Y. Iwata, R. Bourne, C. Rorabeck, and A.R. Poole, (1994), "Increased Damage to Type II Collagen in Osteoarthritic Articular Cartilage Detected by a New Immunoassay", <u>Journal of Clinical Investigation</u>, <u>93</u>, pp. 1722-1732</p> <p>Griffiths, P.R., and J.A. de Haseth, (1986), "Fourier Transform Infrared Spectrometry", <u>Wiley-Interscience</u>, New York, <u>457</u>, pp. 188-193</p>	
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## U.S. PATENT DOCUMENTS

Exam. Initials*	Cite No <sup>1</sup>	Document Number	Kind Code <sup>2</sup>	Name of Patentee or Applicant	Publication Date MM-DD-YYYY	Relevant Portion
		6,230,044	B1	AFANASSIEVA et al.	05-08-2001	
		2001/0048077	A1	AFANASSIEVA	12-06-2001	

## FOREIGN PATENT DOCUMENTS

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		DE	19841217	A1	ACSPECT CORP.	04-29-1999		*

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\*English-language abstract enclosed; USP 6,230,044 and USP 2001/0048077 are related family members of DE 19841217